

October 1, 1953

COMPOSITE LIST OF CURRENTLY OPERATING
FELLOWSHIPS, GRANTS-IN-AID, AND INSTITUTIONAL RESEARCH GRANTS
TO CANCER RESEARCH FROM MAJOR AGENCIES
ACTIVE ON OCTOBER 1, 1953

American Cancer Society	ACS
Atomic Energy Commission	AEC - Government
Damon Runyon Memorial Fund	DRMF
Elsa U. Pardee Foundation	EUPF
Jane Coffin Childs Memorial Fund	JCC
National Cancer Institute	NCI - Government

(Prepared from data available on October 1, 1953)
(Parentheses following name of investigator gives code number
of grant for file purposes)

	Amount	Agency	Research Subjects
<u>ALABAMA</u>			
1. <u>Alabama Polytechnic Institute</u> (Auburn)			
Salmon (N-1F)	\$ 10,000	ACS	Nutrition
Salmon (C-1018 G4)	18,800	NCI	
Salmon (C-1018 C5)	18,800	NCI	
	47,600		
2. <u>Medical College of Alabama</u> (Birmingham)			
Whiteside-Carlson & Carlson (C-1901)	6,480	NCI	Lipides, cell division
Carlson & Whiteside-Carlson (C-1902)	6,696	NCI	Tumor-inhibitory alkylating agents
	13,176		
3. <u>Southern Research Institute</u> (Birmingham)			
Murray (DMSTR-38E)	52,909	ACS	Useful chemotherapeutic agents
Skipper (BI-5F)	20,000	ACS	Anti-cancer & radioactive anti-leukemic agents
Skipper (C-1184 G2)	8,564	NCI	
	81,473		
4. <u>Tuskegee Institute</u> (Tuskegee Institute)			
Henderson (CP-51A)	3,500	ACSI	Sunflower callus tissue
Henderson (C-1632 G)	2,500	NCI	
	6,000		
<u>ARKANSAS</u>			
<u>University of Arkansas</u> (Little Rock & Fayetteville)			
Dinning (GFB-20B)	6,912	ACS	Leukemia, metabolism nucleic acids
Johnson (MOR-23)	5,000	ACS	Growth & morphology bacteria
Meschan (C-1866)	9,277	NCI	Isodose curves
Nettleship (ENV-1B)	5,000	ACS	Neoplastic growth, trauma, skin transplants
	26,189		
<u>CALIFORNIA</u>			
1. <u>California Institute of Technology</u> (Pasadena)			
Borsock (FR-17B)	7,500	ACS	Proteins, isotopes
Galston (CP-50A)	4,500	ACS	Catalase activity, plants
Niemann et al. (C-354 G4)	13,000	NCI	Tumor hemorrhagic agent
	25,000		

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	Amount	Agency	Research Subjects
2. University of California (Berkeley, Los Angeles & San Francisco)			
Adelberg (MET-13A)	4,000	ACS	Bacterial mutants, sterols
Bassett (CIE-6F)	Ext. time	ACS	Steroid hormones, metabolism
Berg (MOR-14C)	Ext. time	ACS	Mytilus edulis
Chalkoff (IS-6F)	8,000	ACS	Radioactive isotopes, cholesterol metabolism
Chalkoff (C-879 C4)	24,823	NCI	
Cohen (F-120B)	Fellow	ACS	Morphogenesis tobacco leaves
Eakin & Berg (C-1554 C2)	2,754	NCI	Protein metabolism, amphibian embryo
Eiler (G-448 C4)	6,843	NCI	Electro-enzyme chemistry
Flickinger (MOR-20)	3,500	ACS	Isotopes, amphibian embryo, C ¹⁴ O ₂
Greenberg (MET-12B)	6,000	ACS	Isotopes, amino acids
Greenberg (DRIR-206A)	13,920	DRMF	
Greenberg (C-327 C5)	8,500	NCI	
Griffith (C-1669 C)	10,000	NCI	Beta-aminoisobutyric acid
Hinton (CP-17E)	8,000	ACS	Chromosomes, diet, Drosophila
Kirk (C-403 C5s)	300	NCI	Cytological chemistry,
Kirk (C-403 C6)	14,526	NCI	Tissue culture
Lawrence & Berlin (C-1440 C2)	13,679	NCI	Red blood cells
Li (H-16A)	15,000	ACS	Hypophyseal hormone
Madden & Zeldis (C-1983)	19,667	NCI	Protein, cells, nitrogen equilibrium
Mazia (E-9G)	7,547	ACS	Enzyme chemistry, chromosomes
Roberts (C-1408 C2)	17,863	NCI	Serum proteins
Simpson (C-1098 C3)	10,000	NCI	Growth hormone
Stanier (E-29D)	8,100	ACS	Enzymes
Stumpf (MET-4C)	7,765	ACS	Metabolism, plants
Tarver (MET-16A)	7,500	ACS	Protein metabolism, isotopes
Williams (PH-3G)	8,964	ACS	Protein macromolecules
Wood (INSTR-43E)	75,000	ACS	Follow-up, cases
	302,251		
3. Cedars of Lebanon Hospital (Los Angeles)			
Friedman (C-1789)	5,751	NCI	Masculinizing ovarian tumors
Henstell (BCH-5A)	5,000	ACS	Desoxyribonuclease
	10,751		
4. Donner Laboratory of Medical Physics (Berkeley)			
Maisin (DRF-127A)	Fellow	DRMF	Radioiron
5. Laboratory for Research on Treatment of Cancer (Boulder Creek)			
Turner (C-957 C5)	4,900	NCI	Treatment
6. Los Angeles County Hospital (Los Angeles)			
Pearson (C-1830)	4,487	NCI	Frogs
Pearson & Visser (C-962 C3)	12,500	NCI	Theiler's virus
	16,987		
7. Mt. Zion Hospital (San Francisco)			
Freedlander (CH-6A)	7,400	ACS	Chemotherapy
Freedlander (DRIR-93B)	7,400	DRMF	
	14,800		
8. Palo Alto Foundation (Palo Alto)			
Salzberg (SG-14)	Scholar	ACS	Azo dye
9. University of Redlands (Redlands)			
Baez (PH-17)	3,700	ACS	X-ray
10. Rees Stealy Clinical Research Foundation (San Diego)			
Stimmel (EDC-10)	5,000	ACS	Excreta, estrogens
Stimmel (C-759 C5)	5,000	NCI	
	10,000		

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11. Santa Barbara Botanic Garden (Santa Barbara)
Walters (C-1513 C2)
12. University of Southern California (Los Angeles)
Edmondson (C-1904)
Lobstein
Macdonald (INSTR-66A)
Macdonald & Guiss (C-1862)
Rittenberg (N-19A)
Starr (C-1214 C2)
Starr et al. (C-1868)

13. Stanford University (Stanford)
Cutting (DRIR-201A)
Danforth (C-1358 C2)
Giese (C-1799)
Ginzton & Kaplan (INSP-65A)
Griffin (PR-15C)
Griffin (DRIR-237)
Griffin (C-1145 C3)
Kaplan (#107)
Kirkman (EDC-5)
Kirkman (C-1579 C)
Kirkpatrick (PH-15A)
Loring (PR-12D)
Luck (BCH-8A)
Luck (C-484 C5)
Tatum (#86)
Tatum & Barratt (EG-27E)
Twitty (CP-13F)
Waxler (C-1518 C)

Amount	Agency	Research Projects
6,370	NCI	Chromosomes, Bromus hybrids
4,428	NCI	Estrogens, liver
2,000	EUPF	Related fields
24,109	ACS	Research coordinating plan
6,653	NCI	
2,376	ACS	Oxidative assimilation
14,310	NCI	Thyrotrophic hormone,
9,342	NCI	Thyroxin
63,218		
9,700	DRMF	Chemotherapy
7,236	NCI	Mutagenic effects nitrogen mustards
4,675	NCI	Ultraviolet radiation
24,915	ACS	Radiation therapy
4,698	ACS	Nucleoproteins
8,035	DRMF	Pituitary factors
4,914	NCI	Nitrogen mustards
12,800	JCC	Lymphoid tumor
5,184	ACS	Hormone induced fibromas
3,000	NCI	
9,000	ACS	X-ray microscopy
8,500	ACS	Nucleic acid
5,000	ACS	Histones, proteins
24,946	NCI	
5,000	JCC	Induced mutations
4,860	ACS	Neurospora
8,000	ACS	Pigment cells
7,668	NCI	Obesity, gold thioglucose
158,131		

COLORADO

- University of Colorado (Denver)
Darley (INSTR-55C)
Darley (DRIR-155B)
Fink (CP-39C)
Herrmann (#102)
Scharrer (CP-1F)

25,000	ACS	Cellular biology,
7,800	DRMF	endocrinology
3,024	ACS	Tissue autoantigens & autoantibodies
6,500	JCC	Radioactive tracers, muscle tissue
8,640	ACS	Neuro-endocrine factors
50,964		

CONNECTICUT

1. Connecticut College (New London)
Christiansen (CP-48A)
2. University of Connecticut (Storrs)
Friedland (PH-14A)
Kind (BCH-14)
Landauer (EG-7F)
3. Wesleyan University (Middletown)
Cochrane (MET-18)

6,000	ACS	Cell metabolism, growth, division
Ext. time	ACS	Mass spectrometer & steroids
4,000	ACS	Phosphoprotein phosphatase
4,500	ACS	Physiology of phenocopies
8,500		
2,000	ACS	Pentose metabolism in microorganisms

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5. Yale University (New Haven)

Albrink (MOR-21)
 Banfield et al. (C-1886)
 Bonner (BO-12H)
 Bunting (C-383 C5)
 Busch (#110)
 Duran-Reynals (V-8G)
 Duran-Reynals (#20)
 Duran-Reynals (C-997 C4)
 Fruton (E-14G)
 Gardner (#13)
 Gaylord (#112)
 Greene (CP-11F) (S)
 Greene (#43)
 Greene (C-918 C4)
 Hakala (#61-33)
 Lippard (INSTR-47E)
 Nichol (SG-8)
 Nicholas & Boell (MOR-9E)
 Parfentjev (C-1201 C3)
 Setlow (PH-20)
 Sokal (V-5)
 Srere (#61-31)
 Strong (EG-38A)
 Strong (C-932 C4)
 Trentin (#97)
 Trentin (C-1491 C2)
 Van Eck (C-1656 C)
 Van Eck (C-1656 Cs)
 Vogel (DRF-109A)
 Wagner (C-1998)
 Welch (CB-7A)
 Welch (DRIB-248)
 Winternitz (#113)

Amount	Agency	Research Subjects
6,000	ACS	Animal & <u>in vitro</u> transplantation
28,091	NCI	Electron microscopy of tissues
5,400	ACS	Genetic control, enzyme specificity
10,098	NCI	Histochemistry
9,000	JCC	Metabolism, <u>in vivo</u>
10,000	ACS	Virus infection
16,500	JCC	
18,306	NCI	
9,400	ACS	Peptide bonds, proteinases
6,800	JCC	Hormonal imbalances
5,000	JCC	Virus development
12,500	ACS	Tissues
25,464	JCC	
12,000	NCI	
3,800	JCC	Nucleic acids
50,000	ACS	Experimental & clinical
Scholar	ACS	Folic acid
9,000	ACS	Embryos
13,524	NCI	Immunochemical differences in sera
8,251	ACS	Spectra biological compounds
6,000	ACS	Heterologous transplants
4,000	JCC	Cholesterol in liver
5,000	ACS	Methylcholanthrene,
10,303	NCI	Gastric lesions
2,000	JCC	Mammary gland,
3,872	NCI	Lactation
9,000	NCI	X-ray, ovary
3,500	NCI	
Fellow	DRMF	Enzymatic adaptation
8,000	NCI	Virus multiplication
28,000	ACS	Pyrimidines
10,750	DRMF	
12,000	JCC	Metabolism, transplants
361,559		

DELAWARE

University of Delaware (Newark)
 Feeny (INSTR-34D)

Ext. time	Agency	Research Subjects
	ACS	Cathode rays, living cells

DISTRICT OF COLUMBIA

1. George Washington University

Cormman (C-1234 C2)
 Cormman (C-1939)
 Klopp (INSTR-24F)
 Kok (BAF-23)
 Smith (C-308 C6)
 Smith & Alpert (DRIB-42C)

Amount	Agency	Research Subjects
3,793	NCI	Proliferation, antibiotics
5,377	NCI	
25,000	ACS	Clinical & research
Fellow	ACS	Reticulosis
10,584	NCI	Control substances
10,000	DRMF	Radioisotopes
54,754		

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	Amount	Agency	Research Subjects
2. <u>Georgetown University</u> Sullivan (C-1340 C3)	4,887	NCI	Tryptophan-kynurenine metabolism
3. <u>Howard University</u> Marshall (C-1420 C2)	4,000	NCI	Krebs tricarboxylic acid cycle
McKinney (C-1676 C)	7,000	NCI	Tissue cultures
Newman (DRIR-111B)	5,400	DRMF	Amino acids
Newman & Marshall (C-1874 R)	11,674	NCI	Embryogenesis, tricarboxylic acid cycle
	28,074		
4. <u>National Academy of Sciences</u> Committee on Growth (INST-12H)	108,756	ACS	Operating budget
Grady (INST-64)	15,000	ACS	Preparation educational material
Heumann (CBC-1H)	27,000	NCI	Chemical-biological correlation
Heumann (C-366 C5)	14,175	ACS	
Lucke (INST-27E)	1,000	JCC	Asst. Atlas of Tumor
Lucke (#96)	28,900	ACS	Pathology
Wason (INSP-75)	1,000	ACS	Budget, Comm. C. Diagnosis & Therapy
Weiss (INST-12A)	2,500	DRMF	Comm. Animal resources
Winternitz (DRIR-80B)	203,581		Diagnosis & therapy

FLORIDA

1. <u>Dade County Cancer Institute</u> (Miami) Grand (DRIR-216A)	7,800	DRMF	Antibiotics & chemotherapeutic agents
Hopman (C-1703 C)	9,936	NCI	Biopsy cytology
	17,736		
2. <u>Florida Southern College</u> (Lakeland) Sokoloff (DRIR-156B)	2,800	DRMF	Ascorbic acid
3. <u>Florida State University</u> (Tallahassee) Metz (GP-44B)	3,888	ACS	Fertilization
4. <u>University of Florida</u> (Gainesville) Ray (CH-14)	11,550	ACS	Therapeutic compounds
Ray (DRIR-33C)	17,500	DRMF	Radioactive derivatives
Ray (C-1066 C3)	12,000	NCI	Acetylaminofluorene
Ray (C-1308 C2)	5,000	NCI	Radioactive sulfur compounds
Ray (C-1356 C2)	7,900	NCI	
	53,950		
5. <u>University of Miami</u> (Coral Gables) Dunning (GP-6F)	Ext. time	ACS	Cysticercus fasciolaris
Dunning (N-15A)	4,000	ACS	Nucleic acid diet
Dunning (C-1861)	7,020	NCI	Immunity
Dunning (C-1864)	2,700	NCI	
Paff (C-2007)	9,000	NCI	Living mast cell
	22,900		

GEORGIA

1. <u>Emory University</u> (Emory University) Foraker (C-1486 C2)	7,000	NCI	Exfoliative cytology
Russell & Wilhelm (EEP-6G)	6,750	ACS	Nitrogen
	13,750		
2. <u>Oglethorpe University</u> (Oglethorpe) Cohen (CP-36C)	3,670	ACS	Protoplasmic organization

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IDAHO

University of Idaho (Moscow)
Beck (C-1802)

Amount	Agency	Research Subjects
6,284	NCI	Clostridium acidu urici

ILLINOIS

1. Cancer Research Inc. (Chicago)
"Cancer Research" (#36)

3,000	JCC	Support, Jour. Cancer Research
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2. Carle Foundation (Urbana)
Quastler (C-302 C5)

6,480	NCI	Med. application, betatron
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3. Chicago Medical School (Chicago)
Davidsohn (C-1113 C3)
Elias & Popper (C-1961)
Skubik (DRIR-261)

14,148	NCI	Antibodies
5,810	NCI	Liver
4,860	DRMF	Cortisone
24,818		

4. University of Chicago (Chicago)

Coggeshall (INST-14F)

165,000

Coggeshall (DRIR-234)

28,000

DeBruyn (R-9D)

6,588

Doyle (E-26D)

5,076

Geiling (C-1652 C)

5,562

Harary (F-143A)

Fellow

Huggins (CBC-3E)

55,000

Huggins (DRIR-2C)

12,000

Huggins (#105)

24,700

Kenyon et al. (CIE-2G)

9,871

Pierce (CFB-21A)

4,000

Pierce (C-1300 C4)

7,500

Putnam (C-1331 C2)

7,080

Rasmussen (C-1565 C)

8,000

Rubin (DRF-102s)

Fellow

Swift (C-1612 C)

2,500

Vennesland (E-34C)

7,500

Weiss (MOR-10E)

20,000

Williams-Ashman (SG-10)

Scholar

367,747

ACS	Adrenalectomy patients, antigens,
DRMF	Radioisotopes
ACS	Selective radiation
ACS	Enzymatic histochemistry
NCI	Radioactive colchicine
ACS	Amino acids
ACS	Chemotherapy
DRMF	Hormonal control
JCC	Steroid hormones, pituitary principles
ACS	Tissue & leukemia & ACTH
ACS	and/or aminopterin
NCI	Proteins, multiple myeloma
NCI	Brain & beta ray
NCI	Gastrointestinal tract
DRMF	Proteins & nucleic acids
NCI	Triphosphopyridine nucleotide
ACS	Morphogenesis
ACS	Metabolism, sodium & potassium
ACS	tissue content

5. Illinois Institute of Technology (Chicago)
Danforth (MET-19)

1,500	ACS	Oxidative metabolism in Euglena
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6. University of Illinois (Chicago)

Black (BO-1F)

14,250

Burstone (C-1373 C2)

5,600

Catchpole (KEP-12D)

6,000

Grant (C-1110 C3)

3,800

Harvey & Bennett (C-854 C3)

7,452

Kirschbaum (BI-10D)

4,725

Kirschbaum (C-1543 Cs)

406

Kirschbaum (C-1969)

9,936

ACS	Plant tumors & virus
NCI	Oral epithelium & radioactivity
ACS	Reproductive organs & hormones
NCI	Gastric mucosa
NCI	Betatron electron & bone, cartilage
ACS	Leukemia therapy
NCI	Adrenal cortical secretion
NCI	Mammary glands

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	Amount	Agency	Research Projects
<u>University of Illinois (Cont'd)</u>			
Kummerow (CH-12)	2,000	ACS	P-dimethylaminoazobenzene
Luria (V-3G)	24,450	ACS	Virus growth & structure
Nance (CP-43B)	3,780	ACS	Indole-3-acetic acid & pyruvate
Odell (CS-15A)	Ext. time	ACS	Gynecologic cancer
Plummer (C-1986)	6,804	NCI	Tissue cultures & amelanotic melanomas
Spiegelman (C-1094 C3)	9,900	NCI	Intracellular enzymes
Vestling (C-1856)	9,965	NCI	Liver enzymes
Winzler (PR-14C)	Ext. time	ACS	Plasma mucoprotein
Winzler (C-1828)	12,000	NCI	Amino acids
	121,068		
7. <u>Loyola University</u> (Chicago)			
Melchior (H-9B)	5,000	ACS	Enzyme systems in pituitary gland
8. <u>Michael Reese Hospital</u> (Chicago)			
Schwarz (DRF-120A)	Fellow	DRMF	Metastasis urinary bladder, prostate
Tannenbaum (DRIR-250)	13,500	DRIR	Nutrition
Tannenbaum (C-248 C7)	12,000	NCI	
	25,500		
9. <u>Northwestern University</u> (Chicago & Evanston)			
Preston & Schrek (VI-4)	1,800	ACS	Immunity to transplants
Wartman (C-1005 C3)	15,000	NCI	Pathological lesions
Fogelson	1,000	EUPF	Enzymes & related chemicals
10. <u>Southern Illinois University</u> (Carbondale)			
Lindgren (C-1179 C3)	17,800	NCI	Enzymes, yeasts
Lindgren & Sheffner (N-17A)	5,000	ACS	Amino acids & polypeptides & proteins
	8,000		
	13,000		
<u>INDIANA</u>			
1. <u>Indiana University Foundation Research Division</u> (Bloomington)			
Campaigne (C-1948)	8,240	NCI	Naphthobenzthiophene series
Haurowitz (PR-19B)	6,000	ACS	Protein-protein interaction
Lawrence (CS-11B)	Ext. time	ACS	Venous pathways, bone, transplants
Muller (EG-9G)	12,000	ACS	Mutations in Drosophila
Muller (C-382 C5)	9,500	NCI	Lymphomas & leukemia
Smith (C-1602 C)	7,961	NCI	Heredity in Paramecium
Sonneborn (EG-31C)	8,187	ACS	
	51,888		
2. <u>University of Notre Dame</u> (Notre Dame)			
Campbell (CH-3C)	2,500	ACS	Unsaturated lactones
Reyniers (DRIR-48C)	20,500	DRMF	Germ-free life
	23,000		
3. <u>Purdue University</u> (Lafayette)			
Benzner (VI-1)	4,300	ACS	Bacteria, ultraviolet radiation
Garner (SG-3)	Scholar	ACS	Microorganisms, mutagenesis
	4,300		
<u>IOWA</u>			
1. <u>Iowa State College</u> (Ames)			
Dahn (CP-49A)	3,600	ACS	Autoradiographic study, insects
Sinsheimer (PH-19)	2,570	ACS	Nucleotides
	6,170		

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2. State University of Iowa (Iowa City)

Nelson (INSTR-77)	10,000
Winnick (CP-60)	4,000
Winnick (C-1765)	6,480
Witschi (MOR-11E)	Ext. time
	26,650

KANSAS

1. Kansas State College (Manhattan)

Burkhard (PR-18B)	1,500
Burkhard (C-1763)	2,330
	3,830

2. University of Kansas (Kansas City & Lawrence)

Bly (SG-1)	Scholar
Bly (C-1916)	9,774
Edelhoch (C-1974)	7,106
Frenkel (CH-8)	6,243
Stahl (C-1987)	13,176
Stowell (INSTR-60B)	25,000
Stowell (DRIR-36B)	10,000
Werder & Hardin (C-1827)	9,869
	81,168

3. St. Margaret's Hospital (Kansas City)

Laing (DRIR-81B)	4,000
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KENTUCKY

1. University of Louisville (Louisville)

Berg (DRIR-160B)	6,700
Hall (MOR-12D)	Ext. time
Kerman & Roseman (DRIR-240)	16,000
Rogers (DRIR-249)	7,000
Rogers (C-1590 C)	6,000
Wiley (DRIR-213A)	5,800
	41,500

2. Ursuline College (Louisville)

Siebert (DRIR-88B)	2,000
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LOUISIANA

1. Alton Ochsner Medical Foundation (New Orleans)

Horvitt & Segaloff (EDC-4)	8,478
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2. Louisiana State University (Baton Rouge)

Kehr (EG-37A)	4,000
Kehr (C-1674 C)	2,700
	7,700

Agency Research Projects

ACS	Cellular physiology
ACS	Tissue cultures and
NCI	Protein & nucleic acid
ACS	Embryonic differentiation &
	Delayed fertilization

ACS	Protein-dye complexes
NCI	Sulfur containing azo dyes

ACS	Radioisotopes, liver tissue &
NCI	hepatomas
NCI	Macromolecular interactions
ACS	'Ascites tumors'
NCI	Vacuum ultraviolet microspectrophotometry
ACS	Blood, urine & tissue changes
DRMF	
NCI	Immunity and transplants

DRMF	Clinical research
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DRMF	Radioisotopes
ACS	Embryology, nervous system
DRMF	Radioisotope procedures, brain
DRMF	Tumor growth rate-susceptibility
NCI	
DRMF	2-Pyrones & unsaturated lactones

DRMF	Enzyme proteins
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ACS	Biosynthesis of steroids
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ACS	Genetic tumors, plants
NCI	

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3. Tulane University (New Orleans)

	Amount	Agency	Research Projects
Baillif (C-1563 C)	6,000	NCI	Radioactive colloids, reticuloendothelium
Carrera (F-140A)	Fellow	ACS	Nucleases & nucleic acid metabolism
Collins (C-1818)	2,630	NCI	Venereal granulomatous lesions
Farber (SG-2)	Scholar	ACS	Chemical pathology
Krementz (C-1985)	2,166	NCI	Needle biopsy
Kurnick (BGH-7A)	6,500	ACS	Desoxyribonuclease-deso. inhibitor-anti in.sys.
Randolph (PH-18)	3,240	ACS	Ultracentrifuge rotor
Segaloff (INSTR-39E)	60,000	ACS	Hormones
	80,536		

MAINE

Roscoe B. Jackson Memorial Laboratory (Bar Harbor)

	Amount	Agency	Research Projects
Borges (EG-35A)	8,420	ACS	Gene action
Dickie (V-17B)	3,056	ACS	Tissues & mammary gland
Dickie & Woolley (EG-34B)	7,500	ACS	Inherited & physio. factors, susceptibility
Pekete (EG-32B)	5,000	ACS	Uterine environment
Griffen (C-1912)	10,908	NCI	Cytogenetics, cells
Hummel (V-18B)	6,292	ACS	Mammary-tumor-milk agent
Kaliss (CP-40C)	Ext. time	ACS	Lyophilized tissues, homiotransplants,
Kaliss (MOR-24)	7,500	ACS	Homografts, tissue antigens &
Kaliss (C-1594 C)	7,500	NCI	Anti-serums
Kaliss (C-1594 C2)	15,228	NCI	
Little (INSTR-70A)	10,000	ACS	Ovaries, spleen transplants,
Little (H-3C)	6,480	ACS	Mutation, mammary inciter
Little	5,000	EUPF	
Little et al. (#35)	6,500	JCG	
Murray (EG-33B)	5,000	ACS	Inbred stocks
Runner (H-11B)	7,290	ACS	Inherited hormonal activity
Runner (C-362 C4)	30,890	NCI	Mammary gland
Russell (EG-12G)	4,500	ACS	Lethal etc. genes, growth, ovaries
Sawin (EG-1G)	5,047	ACS	Growth, known genetic consti., rabbits
Sawin (C-281 C5)	14,283	NCI	
Snell (EG-14G)	5,940	ACS	Somatic & germinal mutations
Snell & Day (CP-7F)	7,000	ACS	Antigens, resistance, transplants
Speirs & Fuller (C-1895)	12,960	NCI	Eosinophil cell, adrenal & pituitary
White (CP-47B)	3,000	ACS	Plants
White (CP-47Bs)	2,400	ACS	
White (CP-59)	9,072	ACS	
Woolley (H-12B)	4,000	ACS	Endocrine balance
	210,766		

MARYLAND

1. Johns Hopkins University (Baltimore)

	Amount	Agency	Research Projects
Baetjer (C-603 C5)	14,999	NCI	Hexavalent chromate dust
Borysko (DRF-99A)	Fellow	DRMF	Cells, electron microscope
Colowick & Kaplan (MET-5C)	11,000	ACS	Phosphorus compound, respiration
Friedenwald (MOR-22)	6,500	ACS	Corneal epithelium
Gey (PH-13B)	Ext. time	ACS	Adv. physical methods
Grayhack (DRF-104A)	Fellow	DRMF	Prostatic growth
Hellerman (C-392 C6)	16,500	NCI	Chemical processes & metabolism
Kern (F-173)	Fellow	ACS	Propionibacterium
Levine (F-148A)	Fellow	ACS	Biochemical & genetic - paramecium aurelia
Lo (DRF-100A)	Fellow	DRMF	Virus
McElroy (C-377 C5)	4,212	NCI	Drug action, mutations

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<u>Amount</u>		<u>Agency</u>	<u>Research Projects</u>
<u>Johns Hopkins University (Cont'd)</u>			
Morgan (C-393 C6)	14,678	NCI	X-ray fluoroscopic screens
Richter (CS-8D)	Ext. time	ACS	Electrical skin resistance method
Rosenfeld (C-6G)	Ext. time	ACS	Growth promoting principle,
Rosenfeld (C-1841)	4,000	NCI	Embryonic tissue
Rupert (F-137A)	Fellow	ACS	Infrared microspectroscopy, living cells
Scott (EDC-1)	7,500	ACS	Prostatic growth & pituitary gland
Scott (INSTR-45D)	20,000	ACS	
TeLinde & Scott (GPF-3E)	Ext. time	ACS	Experimental endometriosis
Weber (F-183)	Fellow	ACS	Genus clostridium, enzymatic mechanisms
Wilkins (CIE-12E)	13,839	ACS	Hormones, adrenal, gonads & growth
	113,228		
<u>2. University of Maryland (Baltimore)</u>			
Figge (C-845 C4)	9,216	NCI	Melanomas, Mexican axolotls & hybrids
Herbst (C-1965)	3,000	NCI	Putrescine, propanediamine, spermine, etc.-liver
McGafferty (C-1759)	324	NCI	Fetal mouse growth & beta radiation
	12,540		
<u>3. National Cancer Institute (Bethesda)</u>			
Korn (DRF-105A)	Fellow	DRMF	Protein synthesis
<u>MASSACHUSETTS</u>			
<u>1. Amherst College (Amherst)</u>			
Kidder (N-2F)	7,000	ACS	Nutrition, growth & proliferation & survival
<u>2. Boston Dispensary (Boston)</u>			
Steckerl & Schmidt (G-1589 C)	6,150	NCI	Cell ribonucleases, ascites (Ehrlich)
Thannhauser & Schmidt (BCH-18)	6,500	ACS	Phosphoric acid diesters metabolism
	12,650		Nucleic acids binding
<u>3. Boston University (Boston)</u>			
Gensler (CBC-6D)	Ext. time	ACS	Podophyllotoxin & picropodophyllin
Gensler (CH-10)	6,553	ACS	& related compounds
Keefer (INSTR-67A)	18,300	ACS	Tissues & growth activity
Lemon (H-7B)	11,341	ACS	Metabolism, testosterone, human tissues
Lemon (C-1643 C)	5,294	NCI	Anal.meth. 11-ketosteroid content, urine
Lemon & Walker (C-930 C4)	14,500	NCI	Analysis, cellular proteins, origin
Lutz (C-1287 C2)	6,500	NCI	Vascularization neoplasms, cheek
Lutz (C-1644 C)	12,000	NCI	pouch, hamster
Taymor (C-1619 C)	4,000	NCI	Irradiation, P32, DNA, human cervix
	78,488		
<u>4. Children's Cancer Research Foundation (Boston)</u>			
Foley & Farber (C-1921)	8,985	NCI	Dihydrotriazines
Landing (C-1975)	5,400	NCI	Histochemical-endocrine, metabolic & neoplastic diseases of children
	14,385		
<u>5. Children's Medical Center (Boston)</u>			
Farber (C-937 C4)	40,000	NCI	Chemotherapy
Ingraham (C-1608 C)	6,000	NCI	Central nervous system & gamma radiation
Miller (C-1691 C)	13,500	NCI	Mechanism, carcinolytic agents
	59,500		

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	Amount	Agency	Research Subjects
6. <u>Harvard University</u> (Boston & Cambridge)			
Albright (EDC-2)	9,072	ACS	Metabolic interrelations
Albright (C-1887)	15,056	NCI	
Aub (C-4G)	13,000	ACS	Chemical variants &
Aub (INSTR-44E)	100,000	ACS	Cell mitosis
Aub & Nathanson (C-1393 C2)	25,500	NCI	Pituitary, steroid hormones & growth
Cohn (INSP-59B) (deceased)	7,000	ACS	Partial Support U.Lab.Phys.Chem.,Med.& Pub.Heal.
Eaton (C-1657 C)	16,464	NCI	Tissue proliferation & virus growth
Folch-Pi (BGH-11)	7,000	ACS	Brain strandin
Frazier (DRIR-182B)	10,000	DRMF	Paraohenylenediamine & living cells
Griesamer (F-104B)	Fellow	ACS	Respiratory enzymes of epidermis
Hertig (C-1611 C)	2,716	NCI	Cervix, pathogenesis, morphology
Hoagland (SG-12)	Scholar	ACS	Protein synthesis in neoplastic tissues
Ladman (F-147A)	Fellow	ACS	Anterior pituitary gland-histochemical
Munson (EDC-7)	8,814	ACS	Pharmacology of parathyroid
Seligman (C-312 C7)	30,000	NCI	Chemotherapy
Schilling (DRF-94A)	Fellow	DRMF	Metabolism & endocrine activity
Stare & Geyer (C-722 C5)	15,000	NCI	Fat emulsion
Straus (F-182)	Fellow	ACS	Pigment formation & growth of maize endosperm
Thimann (BO-6G)	6,079	ACS	Plant growth
Wetmore & Thimann (BO-16E)	4,500	ACS	Conducting system in vascular plants
Wright (BAF-22)	Fellow	ACS	Lymphoid tissue
Zamecheck & Vitale (C-1323 C3)	15,000	NCI	Gastrointestinal tract pathology
	285,201		Nutrition
7. <u>Marine Biological Laboratory</u> (Woods Hole)			
Armstrong (R-7E)	1,600	ACS	
Armstrong (R-7Es)	5,000	ACS	Radiobiology
	6,600		
8. <u>Massachusetts Eye and Ear Infirmary</u> (Boston)			
Balazs (C-1685 C)	8,500	NCI	Acid mucopolysaccharides & tissue growth
9. <u>Massachusetts General Hospital</u> (Boston)			
Aub (C-558 C5)	17,712	NCI	Chemotherapeutic & phys.agents & cytochemistry
Aub et al. (H-15A)	10,000	ACS	Urinary steroids
Castleman (G-1973)	7,341	NCI	Testes, spermatogenesis
Churchill (INSTR-16F)	120,000	ACS	Basic science & clinical investigations
Churchill (DRIR-187A)	53,700	DRMF	
Colby (J-1649 C)	12,080	NCI	Bladder, cervix
Jones (F-189)	Fellow	ACS	Adenosine triphosphate-coenzyme A-acetate reaction
Lipmann (C-823 C4)	21,583	NCI	Biosynthetic mechanisms
Moldawer (F-150A)	Fellow	ACS	Metabolism & growth
Morgan (C-22)	4,558	ACS	Golgi substance, pancreas homogenates
Nathanson & Engel (#106)	16,760	JCC	Urinary steroid metabolites
Scott (BGH-17)	6,500	ACS	Spectroscopic investigation, molecular inter-
Scott (SG-5)	Scholar	ACS	action, growth
Sweet	23,100	AEC	Isotopes, brain, neurosurgical relief of pain,
Sweet (DRIR-161A)	8,750	DRMF	Dev. stereotactic methods
Zamecnik & Aub (E-16E)	6,000	ACS	Protein metabolism
	308,084		
10. <u>Massachusetts Institute of Technology</u> (Cambridge)			
Bear (C-18B)	7,560	ACS	X-ray diffraction connective tissue
Buchanan (DRIR-239)	11,000	DRMF	Enzyme systems
Fitzgerald (F-102B)	Fellow	ACS	Protein fiber formation
Remy (F-136A)	Fellow	ACS	Biosynthesis of nucleotides
Rothstein (DRF-145)	Fellow	DRMF	Ossilated nerve proteins
Spiro (DRF-123A)	Fellow	DRMF	Ultrastructure of mitochondria
	18,560		

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	Amount	Agency	Research Subjects
11. <u>University of Massachusetts</u> (Amherst) Woodside (C-1661 C)	8,375	NCI	Chemotherapy
12. <u>New England Center Hospital</u> (Boston) Alisangco (DRF-147) Dameshek (GPB-16C) Desai (DRF-135) Kumminos (DRF-97A) Patterson (F-180) Pratt (CS-16A)	Fellow 6,696 Fellow 6,674 Fellow 4,752 11,448	DRMF ACS DRMF DRMF ACS ACS	Serum proteins of patients, leukemia, etc. Hemolytic antibodies & leukemia, etc., hemolytic anemia White cell antibodies & leukemia Immunohemolytic anemia & leukosarcoma Cell growth & host resistance Pancreas, urinary enzymes
13. <u>New England Deaconess Hospital</u> (Boston) Gates (C-1844) Hicks (C-1042 C3) Sommers (C-1936) Warren (DASP-74)	8,573 9,774 6,674 10,000 35,021	NCI NCI NCI ACS	Intercellular substances tumor stroma Tissue metabolism nervous system Human cancer growth, hamster Expenses, Polaroid Color Transplanting Ultraviolet Microscope-Dr. Ruth Graham, etc.
14. <u>Peter Bent Brigham Hospital</u> (Boston) Goetz (DRF-73A) Haydar (DRF-144) Sturgis (H-17A)	Fellow Fellow 4,816 4,816	DRMF DRMF ACS	Adrenalectomy & prostate, hyperinsulinism Adrenal steroid metabolism Steroid hormones & endometrial nucleic acids
15. <u>Scientific Specialties Corporation</u> (Boston) "Microscopes" (INSP-73) "Microscopes" (DRIR-252)	75,000 10,000	ACS DRMF	Purchase, color translating ultraviolet microscope
16. <u>Thorndike Memorial Laboratory</u> (Boston) Freinkel (F-168)	85,000 Fellow	ACS	Tissue iodide accumulation
17. <u>Tufts College</u> (Medford & Boston) Bernfeld (C-1680 C) Bonner (C-1958) Christensen (C-1268 C2) Davidson (F-191) Fishman (C-915 C4) Fishman (C-915 C5) Fishman (C-1964) Fishman & Bernfeld (E-39B) Homburger (INSTR-31F) Homburger (DRIR-43C) Kasdon (C-1978) Shen (GPB-15D)	6,000 4,762 16,330 Fellow 10,000 10,000 5,000 4,800 50,000 9,401 6,856 Ext. time 123,149	NCI NCI NCI ACS NCI NCI NCI ACS ACS DRMF NCI ACS	Plasma proteins, micro-electrophoresis Glucuronic acid metabolism, humans Amino acid assimilation & cells Phosphoproteins, prostatic acid phosphatase B-glucuronidase & growth Biochem. stud. prostatic acid Phosphatase Purified B-glucuronidase Enzymatic synthesis glucuronidase Plasma proteins, mice Vaginal beta-glucuronidase Anemia
18. <u>Vincent Memorial Hospital</u> (Boston) Graham (C-1810)	11,053	NCI	Radiation & sensitization response-SR
19. <u>Wellesley College</u> (Wellesley) Jones (C-821 C5)	5,956	NCI	Mammary glands, mice Tests on paramecia
20. <u>Worcester Fdn. for Experimental Biology</u> (Shrewsbury) Pincus (EDC-8) Pincus (INSTR-63B) Pincus (DRIR-61C)	10,933 18,600 10,700 40,233	ACS ACS DRMF	Biogenesis androgens & estrogens Steroid metabolism

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MICHIGAN

	Amount	Agency	Research Subjects
1. <u>Detroit Institute of Cancer Research</u> (Detroit)			
Albert & Johnson (BCH-1A)	5,000	ACS	Chromosomes, phosphorus meta. & endocrine organs
Guthrie (C-1872 R)	7,859	NCI	Ovarian cells
Johnson & Albert (C-928 C4)	8,125	NCI	Cells, phosphoprotein, mammalian tissues
Johnson & Albert (C-1692 R)	4,300	NCI	
Raut	35,739	EUPF	Chemotherapy
Simpson & Scott (INSTR-17F)	50,000	ACS	Integrated stud., clin. & exper.
	111,023		
2. <u>Michigan State College</u> (East Lansing)			
Tukey & Lucas (CH-17)	8,000	ACS	Assay, substances, cell behavior
3. <u>University of Michigan</u> (Ann Arbor)			
Bauer (C-1719 R)	7,425	NCI	Tumor glutathione
Bethell (C-1994)	11,381	NCI	Labile methyl, leukemic, non-1., & pteroylglutamic acid
Furstenberg (INSTR-69A)	15,000	ACS	Nature, detection, cure
Hodges	3,000	EUPF	Clinical records
Miller et al. (C-1896)	5,000	NCI	Estrogen
Susman (MET-11B)	2,160	ACS	Ascospores of neurospora
Sutherland (C-1559 C2)	7,000	NCI	Infrared spectroscopy & protein molecules
Vial (C-1835)	14,110	NCI	Antibody-isotope complex, human
	65,076		
4. <u>Siena Heights College</u> (Adrian)			
Stinson (PH-12B)	1,188	ACS	Ultraviolet absorption & nucleic acid deriv.
5. <u>Wayne University</u> (Detroit)			
Djerassi (EDC-3)	6,782	ACS	Isomers, analogs steroid hormones

MINNESOTA

1. <u>Concordia College</u> (Moorehead)			
Werth (C-1606 C)	216	NCI	Benzo(c)phenanthrene & derivatives
2. <u>University of Minnesota</u> (Minneapolis)			
Barnum (V-5G)	6,000	ACS	Mammary glands, mice
Bittner (EG-17G)	5,000	ACS	Mammary cancer & genetics
Bittner (EG-18G)	10,000	ACS	Tumor milk agent
Bittner	20,000	EUPF	
Cohen (C-1330 C2)	10,495	NCI	Steroidal conjugation mechanisms
Diehl (INSTR-49D)	75,000	ACS	Insti. research, U. Minn.
Gutman (MET-21)	4,000	ACS	Carcinogenic amines & metabolism
Hitchcock (C-298 C7)	15,000	NCI	Gastric cancer, methylcholanthrene
Hitchcock (C-1218 C2)	3,980	NCI	induction, stomach
Kolthoff (C-721 C4)	15,660	NCI	Metal ions & sulfhydryl compounds
Kolthoff (C-721 C5)	15,000	NCI	Blood sera
Reed (EG-24E)	6,925	ACS	Genetics, breast, human
Syvertson (V-6G)	4,800	ACS	Host cell & virus, immunization
Syvertson (C-725 C4)	15,000	NCI	leukemia & mammary - mice
Wangenstein (DRIR-99B)	15,000	DRMF	"Second-Look" operations
Wild (C-1244 C2)	21,616	NCI	Ultrasonic pulses & tissue density changes
Zimmerman (SG-17)	Scholar	ACS	Endocrine physiology & metabolic balance
	243,476		

MISSOURI

1. <u>Midwest Research Institute</u> (Kansas City)			
Goodson (C-802 C4)	31,270	NCI	Animal assay for treatment
Goodson (C-1816)	3,051	NCI	

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	Amount	Agency	Research Subjects
2. <u>University of Missouri</u> (Columbia)			
Faberge (C-990 C4)	1,725	NCI	Genetic mutations & ultraviolet radiation
Novitski (C-1578 C2)	9,167	NCI	Chromosomes
Shaver (C-1989)	5,147	NCI	Cleavage in frog egg
	16,039		
3. <u>St. Louis University</u> (St. Louis)			
Bauer (DRIR-189A)	9,000	DRMF	Rapid freezing, virus & non-virus
Luyet (CP-53A)	5,075	ACS	Cell survival & frozen tissue
Luyet (#103)	3,500	JCC	Red cells, frozen blood & ice formation
Seibert (DRF-121)	Fellow	DRMF	Steroid metabolism & enzymatic activity
	17,575		
4. <u>Washington University</u> (St. Louis)			
Allen	9,000	AEC	Gamma ray therapeutic agent
Berg (F-158A)	Fellow	ACS	Enzymes & phosphate di-ester bond
Commoner (V-9D)	6,561	ACS	*Reduplication tobacco mosaic virus, growth processes
Graham (DRIR-251)	12,700	DRMF	*Tobacco smoking & lung cancer
Gutsche (CH-11)	6,966	ACS	Colchicine & related compounds
Hamburger & Levi-Montalcini (C-1801)	13,100	NCI	Sarcomas(mice)& nervous system chick embryo
Lowry (C-11E)	13,895	ACS	Cytochemistry nervous system
Cori (INSTR-32F)	60,000	ACS	Growth
Roberts (C-1245 C2)	13,000	NCI	Free amino acids, peptides & nitrogen meta.tissues
Silberberg & Silberberg (EDC-9)	4,000	ACS	Hormones, mice
Velick (E-25D)	7,100	ACS	Enzymes
Weiss (DRF-92A)	Fellow	DRMF	Orcein, elastin reaction
	146,322		

MONTANA

<u>Montana State University</u> (Missoula)			
Loran (DRIR-192A)	5,300	DRMF	Oncolytic effect NDBS fraction podophyllin on tumor tissue

NEW HAMPSHIRE

<u>Dartmouth College</u> (Hanover)			
Tyson (DRIR-253)	7,000	DRMF	Pulmonary function radiation fibrosis

NEW JERSEY

1. <u>Princeton University</u> (Princeton)			
Bonner (MOR-16C)	1,000	ACS	Cell differentiation amoeboid slime molds
Fankhauser (MOR-15C)	4,500	ACS	Dev., grow., & fertility polyploid salamanders
Jacobs (BQ-18D)	2,160	ACS	Cell differentiation vascular plants
	7,660		
2. <u>Rutgers University</u> (New Brunswick)			
Allison (INSTR-51D)	17,812	ACS	Tissue equilibrium & metabolic interrelations
Allison & Leatham (CP-23E)	8,856	ACS	Experimental production tumors
Crossley (CH-5A)	6,000	ACS	Chemotherapy
Leatham (EDC-6)	6,156	ACS	Abnormal ovarian growth
	38,824		

NEW MEXICO

1. <u>University of New Mexico</u> (Albuquerque)			
Daub (C-1595 C)	3,672	NCI	1-methyl, 7-meth., 8-meth. & 10-methyl-3, 4-benzpyrene

2. Highlands University (Las Vegas)
Robins (DRIR-260)

Amount
4,800

Agency Research Subjects
DRMF Imidazo(c)pyridines, potential purine antagonists

NEW YORK CITY

1. American Museum of Natural History
Breder (DRIR-39D)
Breder (DRIR-39E)

10,000
10,000
20,000

DRMF Environmental & endocrine control
DRMF Cell proliferation

2. College of the City of New York
"Society for Experimental Biology & Medicine" (DRIR-143A) 150

DRMF Pub. cancer articles

3. Columbia University

Bloch (F-184)
Chargaff (BCH-3A)
Curth (C-1603 C)
Davidson (F-146A)
Dische (PR-16C)
Fiala (C-21A)
Frantz et al. (C-1981)
Gellhorn (DRIR-56C)
Gellhorn (C-1386 C2)
Gellhorn & Hirschberg (C-1894)
Gluecksohn-Waelsch (G-2)
Gold (F-159A)
Godman (#114)
Gray (DRIR-243)
Graff
Graff & Haagenensen (C-1794)
Gusberg (C-1793)
Habif (DRIR-244)
Hudson (BCH-6A)
Hudson & Reiner (C-1639 C)
Hyman (DRIR-255)
Jailer (S-12D)
Lattes (DRIR-247)
Levy (ENV-2B)
Lieberman (C-1918)
Murray & Chargaff (DRIR-162B)
Oppenheimer (C-1620 C)
Quimby (R-16A)
Rappleye (INSTR-18F)
Rittenberg (IS-2G)
Rittenberg et al. (CIE-3G)
Ryan (BC-13F)
Shemin (MET-24)
Shils & Shapiro (C-1783)
Stork (CH-16)
Taylor (C-1797)
Taylor & Lieberman (DRIR-215A)
Wallace (DRF-139)

Fellow
7,500
7,117
Fellow
6,000
Ext. time
3,240
79,110
10,000
8,083
3,070
Fellow
2,980
100
16,000
10,000
7,500
15,000
6,000
5,000
7,500
4,000
3,200
Ext. time
16,300
6,480
32,076
8,527
125,000
10,935
15,000
7,000
6,000
5,672
7,000
6,884
23,500
Fellow
471,774

ACS Desoxyribonucleic & nuclear prot., mitotic cycle
ACS Nucleoproteins
NCI Acanthosis nigricans
ACS Chemotherapy & nucleic acid turnover in tumors
ACS Proteins (prosthetic) & growth
ACS Carcinogen accumulation (mitochondria)
NCI Thyroid (Long-Evans rat) internal & ex. radiation
DRMF Purines & pyrimidines
NCI in chemotherapy
NCI Chemotherapy, brain tumors, human
ACS Genetics, embryonic death, early pregnancy
ACS Steroidal patterns, adrenal virilism & cortisone
JCC Mitotic cycle & antimetabolites
DRMF Spon. lecture in U.S., Dr. L.H. Gray, Great Brit.
EUFF Growths in animals
NCI Anti-leukemia protective factor
NCI Radiosensitivity, cervical, humans
DRMF Chemotherapy
ACS Acid Phosphatase, human prostatic & adenoma
NCI Prostate, enzymatic glutamine synthesis
DRMF Iron metabolism & neoplastic disease
ACS Metabolism, estrogens, adrenal steroids & proteins
DRMF Mitotic cycle & antimetabolites - cytochemical
ACS Oral neoplasms, tongue
NCI Urinary 17-ketosteroids & cortisone, hydrocortisone
DRMF Mitosis poisons
NCI Invest. imbedding plastic films
ACS Radiation dosage
ACS Stud., Insti. Cancer Research & Francis Delafield Hosp.
ACS Metabolism, proteins, tissues
ACS Isotope technique, humans
ACS Biochemical mutants microorganisms
ACS Biosynthesis porphyrins
NCI Chemotherapy, vitamin content of host
ACS Colchicine & related tropolone systems
NCI Human ovary, gynecologic neoplasms
DRMF Cyto. & biochemistry, neoplasms, human
DRMF Steroidal excretion patterns
in adrenal virilism

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	Amount	Agency	Research Subjects
3. <u>Cornell University</u>			
Cattell & Kensler (BI-2F)	7,500	ACS	Azo dyes, liver, rats
Engle (C-1905)	8,310	NCI	Multiple myeloma, abnor. proteins & plasma cells
Ferguson (C-1917)	2,862	NCI	Colchicine, biological & pharmacological
Ferguson (C-1992)	9,134	NCI	
Kidd (CPB-18B)	Ext. time	ACS	Structure changes & antibodies, cytotoxic agents
Kidd (V-2G)	15,000	ACS	Virus papillomas, cytological & biological
Papanicolaou (INSP-58B)	48,000	ACS	Exfoliative secretions breast
Riker (MA-7E)	Ext. time	ACS	Pharmacology compounds & mitosis & growth
	90,806		
4. <u>Francis Delafield Hospital</u>			
"Genetics Society of America" ¹ (DRIR-242)	1,000	DRMF	Contributions send members Int. Cong. Genetics Italy
5. <u>Fordham University</u>			
Berger (C-492 C5)	2,160	NCI	Polyploidy & diploid plants
Brown (C-1390 C2)	5,616	NCI	Heterocyclic analogs compounds
Brown (C-1821)	4,050	NCI	Sex hormones
Cerecedo (DRIR-41B)	7,200	DRMF	Nucleic acids & growth, purine & amino acid
Cerecedo (C-1370 G2)	6,700	NCI	composition tissues
	25,726		
6. <u>Harlem Hospital</u>			
Wright (DRIR-50C)	15,000	DRMF	Tissue culture
Young (C-1607 C)	9,913	NCI	Triethylene melamine, antibiotics, folic acid
	24,913		antagonists, achromycin, ACTH
7. <u>Haskins Laboratories</u>			
Rutner (CP-57)	4,700	ACS	Nutrition, lipid growth, microorganisms
Zahl & Albaum (C-1622 C)	9,115	NCI	Blood & tissue levels nucleotides
	13,815		
8. <u>Memorial Center for Cancer & Allied Diseases</u>			
Bieseke (C-678 C5)	11,100	NCI	Tissue culture
Bodansky (C-1443 C2)	12,085	NCI	Adrenal & other steroid & biochem. blood, tissues
Bodansky & Randall (C-1694 C)	15,000	NCI	Composition intracellular phase, surgery, human
Brown (C-471 C5)	28,336	NCI	Nucleo-proteins & growth
Burchenal (C-679 C5)	17,500	NCI	Chemotherapy exper. leukemia
Changus (C-1971)	4,860	NCI	Histochemical differentiation bone tumors
Fath (DRF-46A)	Fellow	DRMF	Thyroid-adrenal relationships
Fox (DRF-124A)	Fellow	DRMF	Nucleic acid biosynthesis, nucleotides & ribofuranosyl nuc.
Gallagher (S-4F)	30,600	ACS	Steroid excretion
Gallagher (C-440 C4)	39,009	NCI	Biochemical & chemical inves. steroids
Guthrie (C-1848)	9,681	NCI	Chem. genetics bacteria & nucleic acid metabolism
Hansbury (F-169)	Fellow	ACS	Thyroid stimulating hormone (TSH) & lipid metabolism
Hamilton (C-1813)	5,899	NCI	Nucleic acids & compounds & human leukocytes
Kappas (F-107B)	Fellow	ACS	Steroid metabolism
Karnofsky (C-675 C5)	12,733	NCI	Neoplastic tissue, chick embryo, Hodgkin's disease
Koch (SG-4)	Scholar	ACS	Hemoglobin metabolism & ionizing irradiation
Laughlin & Nickson (R-21)	8,100	ACS	Cell differential sensitivity & radiation
Li (DRF-140)	Fellow	DRMF	Hypophysectomy & hypothalamic irradiation, mammary gland
Mellors (DRIR-258)	9,500	DRMF	Quan. analy. cell interference microscopy
Murphy (DRF-117A)	Fellow	DRMF	Biochem., resistance A-methopterin
Nickson & Escher (DRIR-72B)	10,000	DRMF	Steroid changes, hormone therapy, radiation, mammary gland
Nickson & Laughlin (DRIR-226A)	22,000	DRMF	High energy radiation, humans
Nickson & Seal (C-1579 C)	13,000	NCI	Prog. eval. rotational therapy to 250 KV
Ortega (DRF-141)	Fellow	DRMF	Microscopy, humans
Pearson (DRIR-259)	10,000	DRMF	Altered hormonal environ. & breast cancer
Phillips (C-415 C5)	38,921	NCI	Program chemotherapeutic agents
Phillips	20,000	EUFP	
	950,160		

	Amount	Agency	Research Subjects
<u>Memorial Center (Cont'd)</u>			
Poppell (DRF-101A)	Fellow	DRMF	Cardiopulmonary function & radical surgery
Randall & Fortner (C-1877)	5,522	NCI	Etiology, gallstones
Rawson et al. (AEP-14G)	11,000	ACS	Thyroid, biology
Rawson & Pearson (C-925 C5)	29,772	NCI	Tissue catabolism & metabolism, humans
Rhoads (INSTR-10G)	350,000	ACS	Steroid cancer chemotherapy
Rhoads (DRIR-103B)	7,500	DRMF	Damon Runyon Research beds, children
Rhoads (DRIR-150A)	40,000	DRMF	Damon Runyon Research Ward
Rhoads (DRIR-219A)	34,000	DRMF	Clin.Stud., viruses
Rhoads & Day (DRIR-223A)	24,300	DRMF	Respiratory, upper gastro-intestinal & environment
Rhoads et al. (DRIR-208A)	13,000	DRMF	Pathologic physiology, prostatic cancer
Rhoads & Marshall (DRIR-76A)	15,000	DRMF	Hormone therapy, vesical carcinoma, dogs
Rhoads & Rawson (DRIR-218A)	12,000	DRMF	Serum iodine, serum protein & thyroid & radioiodine
Rhoads & Richardson (DRIR-241)	7,200	DRMF	Histopathology, hypothysectomized animals fed carcino.
Rhoads et al. (C-1889)	40,000	NCI	Clin. eval. chemotherapeutic agents
Richardson et al. (C-1809)	10,000	NCI	Inhibitory actions chemical carcinogens
Roberts (DRF-118A)	Fellow	DRMF	Metabolic balance, surgical patients
Sonenberg (SG-9)	Scholar	ACS	Pituitary physiology
Toolan (#108)	15,000	JCC	Human tumors in animals
West (SG-16)	Scholar	ACS	Endocrine factors
Woolley (C-1796)	17,542	NCI	Steroids & cancer control
9. <u>Montefiore Hospital</u>	950,160		
Laszlo (DRIR-246)	10,000	DRMF	Metabolic studies, patients
Laszlo (C-1540 C2)	23,170	NCI	
	33,170		
10. <u>Mount Sinai Hospital</u>			
Hollander (C-228 C7)	12,997	NCI	Gastric mucus secretion, gastric can. & peptic ulcer
Kremen (C-1876)	8,154	NCI	Nutritional adjustment & extensive intestinal resections
Sobotka (C-1791)	8,915	NCI	Lipoid complexes serum albumin
	30,066		
11. <u>New York Medical College</u>			
Neuberg (C-16G)	4,000	ACS	Nucleic acid complexes & growth
12. <u>New York University</u>			
Brendler (H-5B)	5,000	ACS	Nutrition, endocrine therapy, prostatic
Brendler (C-1599 C)	5,994	NCI	
de Bodo (EEP-15D)	11,000	ACS	Adrenal cortical hormones & pituitary
Goldsmith (N-14B)	3,780	ACS	Nucleic acid metabolism, drosophila melanogaster
Gordon (CPB-19B)	5,870	ACS	Endocrine factors, blood formation & destruction
Harnly (DRIR-256)	9,500	DRMF	Larval fluids of drosophila melanogaster
Harnly & Kopac (C-1580 C)	3,600	NCI	Nutrition, temperature, tumor genes, drosophila
Hirshfield (CP-52A)	4,500	ACS	Nucleus cytoplasm & n.c. complex & cell growth & differen.
Landauer (DRF-131)	Fellow	DRMF	Pressure-temperature, energetics Sol-gel react., cell div.
Levy (BCH-15)	5,500	ACS	Chemical structure proteins
Marsland (C-807 C4)	2,451	NCI	Mechanisms cell division,
Marsland (C-807 C5)	2,986	NCI	Pressure-temperature study
Mateyko (DRF-125A)	Fellow	DRMF	Intracellular stratification, histochem. & cytochem. cells
Mulholland (INSTR-61B)	30,000	ACS	Supporting & integrating projects at Center
Nelson (DRIR-138A)	81,680	DRMF	*Respiratory, environment, inhaled materials
Ochoa (E-10F)	7,560	ACS	Enzyme systems, biol. oxidations & synth., animal tissues
Ratner (E-21E)	6,750	ACS	Enzyme mech., amino nitrogen, urea formation
Sheehan (DRIR-247)	5,679	DRMF	Equipping operating room
Slautterback (F-153A)	Fellow	ACS	Proteolytic activ. microsome fract., neoplas. tissue
Sulzberger (C-1379 C2)	10,000	NCI	Immunologic & allergic changes
Taylor (CP-41B)	4,500	ACS	Tissue survival after freezing
	206,350		

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	Amount	Agency	Research Subjects
13. <u>New York Zoological Society</u> Gordon (C-297 C5)	17,200	NCI	Pigment cell growth
14. <u>Presbyterian Hospital</u> Golden et al. (C-1756) Klegerman (DRIR-235)	135,975 2,954 138,929	NCI DRMF	Multimillion volt x-ray & electron beam therapy Graphics & localizing radium implants
15. <u>Rockefeller Institute</u> Marmur (F-178)	Fellow	ACS	Bacterial transformation
<u>NEW YORK STATE</u>			
1. <u>Albany Medical College</u> (Albany) Wright & Wolfe (C-1105 C3)	11,707	NCI	Etiology spontaneous mammary tumors Milk agent, rats
2. <u>Basset Hospital</u> (Cooperstown) Hanks (C-1027 C4)	4,470	NCI	Course: Principles, techniques, & applications of tissue culture
3. <u>University of Buffalo</u> (Buffalo) Bloom (C-1853) Carruthers (BCH-2A) Kimball (INSTR-76) Lowe (C-1693 C) Whitbasky (DRIR-137A)	13,825 5,000 15,000 8,000 12,960 54,785	NCI ACS ACS NCI DRMF	Porphyryn, hemoglobin, iron & copper metabolism Polarographically reducible substances Institutional research, U. Buffalo Cortisone, nucleic acid metabolism, liver Properties, tissues
4. <u>Carnegie Institution of Washington</u> (Cold Spring Harbor) Demerec (EG-21F)	7,400	ACS	Mutagens
5. <u>Cornell University</u> (Ithaca) Singer (MCR-19A)	4,000	ACS	Nerve & regeneration of amputated extremity, regeneration process, salamander, etc.
6. <u>Maimonides Hospital</u> (Brooklyn) Friedgood (C-1383 C2)	4,000	NCI	Nitrofurans
7. <u>Nassau Hospital</u> (Mineola) Ponder (CPB-14D)	5,000	ACS	Hemolytic material & tissue
8. <u>New York State College of Agriculture</u> (Ithaca) Smith & Srb (C-1256 C3)	6,000	NCI	Chromosome structure, gene mutation & certain chemicals
9. <u>Polytechnic Institute of Brooklyn</u> (Brooklyn) Barker (DRIR-200A)	15,000	DRMF	Protein structure
10. <u>Research Fdn. of the State Univ. of New York</u> (Brooklyn & Syracuse) Burlington (C-1875) Schulman (C-1852) Tepperman & Tepperman (EDC-11) Weiss (C-1800) Westerfeld (N-10D)	1,000 5,848 4,752 4,590 6,000 22,190	NCI NCI ACS NCI ACS	Hormones, peptide bond synthesis Biosynthesis of porphyrins Cell adaptation, mammalian tissue Amino groups, blood & hematopoietic tissues Diet, xanthine oxidase etc.

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	Amount	Agency	Research Projects
11. <u>University of Rochester</u> (Rochester)			
Dounce (C-994 C3)	5,500	NCI	Biochem., cell nuclei, enzyme systems
Holtfreter (CP-8F)	Ext. time	ACS	Differentiating cells
Keutmann & Burton (C-1003 C3)	13,000	NCI	Paper partition chromatography to steroid hormones, human
Keutmann & Waterhouse (C-739 C5)	25,493	NCI	Metabolism
Miller (#101s)	22,500	JCC	Protein synthesis & neoplastic growth
Morton & Keutmann (INSTR-57G)	23,185	ACS	Tumor host relationships
Stolz (#111)	10,000	JCC	Oxidation capacity, hormone-stimulated uterus
Tobin (C-1946)	3,684	NCI	Lymphatics, human lungs
	103,362		
12. <u>St. Johns University</u> (Brooklyn)			
Lilly (CP-58)	3,000	ACS	Nutrition & growth, protozoa
13. <u>Society for Study of Development and Growth</u> (Brooklyn)			
Boell (C-1970)	1,000	NCI	12 Sympos., Soc., Study of Development & Growth
Nickell (Treasurer) (INST-3E)	1,000	ACS	Annual " " " " " " " "
	2,000		
14. <u>Trudeau Foundation</u> (Saranac Lake)			
Vorwald (ENV-4A)	13,618	ACS	Adenocarcinoma, lung, rats, & beryllium
Vorwald & Pratt (DRIR-75B)	9,265	DRMF	Industrial dust & lung cancer
	22,883		
15. <u>Vassar College</u> (Poughkeepsie)			
Kuntz (R-20)	9,000	ACS	Irradiation & neoplasia on nucleolytic enzymes of lymphoid tissues, mice
16. <u>Waldemar Medical Research Foundation</u> (Brooklyn)			
Molomut (CP-54A)	4,892	ACS	Prior allergic conditioning
Spain & Molomut (C-1658 C)	9,000	NCI	Alteration of response cancer grafts, inter-abdominal sarcoma & heterologous tumor grafts
	13,892		
<u>NORTH CAROLINA</u>			
1. <u>Duke University</u> (Durham)			
Anlyan (C-1439 C2)	3,996	NCI	Tissue antigen, gastric secretions, stomach
Beard (V-14D)	12,500	ACS	Avian leukosis virus
Beard (C-972 C4)	20,000	NCI	
Eckert (SG-11)	Scholar	ACS	Avian leukosis virus
Engel (EEP-10E)	6,000	ACS	Hormones, metabolism, steroid hormones
Hobbs (DRIR-186A)	37,000	DRMF	Smoke aerosols
McKinney (F-125B)	Fellow	ACS	Metabolism, human bone marrow & chemicals, radiant energy
Naylor (CP-42B)	4,498	ACS	Maleic hydrazide - plant growth inhibitor
Rundles (C-1843)	4,752	NCI	Triethylene melamine therapy & serum proteins, humans
Smith (C-1636 C)	2,513	NCI	Testicular tumors
Werk (F-192)	Fellow	ACS	Ketone metabolism, human
Willet (DRF-39)	Fellow	DRMF	Abnormal proteins, multiple myeloma
	91,259		
2. <u>University of North Carolina</u> (Chapel Hill)			
Bunce (C-1867)	2,700	NCI	P-32 uptake by bladder tumors
Cutter (CP-38C)	3,564	ACS	Isolated endosperm nuclei & nucl. cytoplas. relationships
Hooker (#52)	4,000	JCC	Testicular tumors, mice
Irvin (BOH-13)	6,000	ACS	Nucleoproteins & nucleic acids, tissues, interaction molecules
Thomas & Peters (C-1915)	5,477	NCI	Radiogold, lymphatic, human
	21,741		
3. <u>Wake Forest College</u> (Winston Salem)			
Swanson (E-37B)	3,200	ACS	Intermediary metabolism, washed particles liver

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NORTH DAKOTA

N. D. Agricultural Experimental Station (Fargo)
Sleeper (MET-25)

Amount	Agency	Research Subjects
1,800	ACS	Oxidative metabolism of starch & cellulose by actinomycetes

OHIO1. University of Cincinnati (Cincinnati)

Freiman (C-1836)
 Schiff (DRIR-245)
 Vilter (BCH-19)

3,240	NCI	Enzyme activation in tissue
9,700	DRMF	Physiochemical prop., gastric mucus in gastric c.
6,000	ACS	Nuclease activity, cells, human leukemia & inhibitors
18,940		

2. Ohio State University (Columbus)

Doan (INSTR-56C)
 Doan (C-1560 C)
 Hayes & Knouff (C-1817)
 Meyers (C-1899)
 Morton
 Schlumberger (C-1567 C)
 Towbin (C-1623 C)
 von Haam (C-1683 C)

15,000	ACS	Coordinated insti. research program
53,946	NCI	Total body irradiation on sub-human primates
4,536	NCI	Acetal lipids in cells
15,500	NCI	Artificial radioisotopes for therapy
25,000	AEC	Radioisotopes & therapy
3,626	NCI	Study of reaction to injury
5,391	NCI	Transplants, human tumors, cortisone, total body radiation
5,380	NCI	Biological testing carcinogenic hydrocarbons
128,379		

3. Western Reserve University (Cleveland)

Benue (F-163)
 Cantoni (E-40B)
 Dobyns (CS-13B)
 Hirschmann (C-1679 C)
 Kaufman (C-1735)
 Leuchtenberger (C-1814)
 Sayers (CIE-8F)
 Simeone (C-1571 C)
 Weisberger (CPB-17B)
 Weisberger (C-1678 C)
 Wood (IS-5G)

Fellow	ACS	Thyroid, radioiodine
10,000	ACS	Enzymatic mechanisms in transmethylation
8,500	ACS	Thyroid cancer
6,324	NCI	Adrenal steroids, chemistry & metabolism
13,371	NCI	Animal viruses, animal & human tumors
12,074	NCI	Mitosis inducing properties of tumors
12,852	ACS	Pituitary adrenocorticotrophic hormone
4,408	NCI	Gastro-intestinal tract, hydrocarbons
Ext. time	ACS	Cysteine & related compounds
5,934	NCI	in leukopoiesis
12,000	ACS	Isotopic tracer studies biochem. problems re physiology cells
85,463		

OKLAHOMA1. Oklahoma Medical Research Institute (Oklahoma City)

Kochakian (INSTR-62B)
 Kochakian (C-1954)
 Rebell & Lamb (C-1930)
 Reifenstein (C-1564 C)

31,900	ACS	Growth
10,284	NCI	Androgens & tissue enzymes
4,644	NCI	Systemic mycoses in mice with lymphomas
24,732	NCI	Agents altering tissue growth rate of tissues, man and animals
71,560		

2. University of Oklahoma (Oklahoma City)

Everett (C-1633 C)
 Hopps (C-1926)
 Shetlar (CS-17A)

4,500	NCI	Mucopolysaccharides associated proteins, tissue
6,025	NCI	Factors inhibiting neoplastic growth
4,940	ACS	Serum polysaccharide tests
15,465		

OREGONUniversity of Oregon (Portland)

Clancy (CP-61)
 Fitzpatrick et al. (DRIR-257)
 Grossman (C-1206 C2R)
 Lerner (MET-1C)

2,000	ACS	Transplants, nutrition, phenotype, melanotic tumors eye
17,000	DRMF	Metabolism of melanomas
4,060	NCI	Steroid hormones, in vitro incor. C ¹⁴ glycine, liver protein
4,750	ACS	Melanomas, metabolism & chemotherapy
27,810		

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PENNSYLVANIA

	Amount	Agency	Research Subjects
1. <u>Children's Hospital of Philadelphia</u> (Philadelphia) Gostling (BAF-21)	Fellow	ACS	Biological investigation virus hypothesis
2. <u>Hahnemann Medical College & Hospital</u> (Philadelphia) Briody (VI-2) Oesper (MET-15A) van Dyke (C-1878) Wase & Boyd (C-1881)	8,000 4,950 6,600 8,000 27,550	ACS ACS NCI NCI	Viruses, Krebs 2 "ascites tumor", mice Oxidative reaction of glycolysis Thyroid & thymic neoplasia Biochemical relations, 2-acetylaminofluorene & riboflavin during chemocarcinogenesis
3. <u>Immaculata College</u> (Immaculata) Suter' (DRIR-196A)	1,500	DRMF	Spleen extract action on fatty acid metabolism of tissues
4. <u>Institute for Cancer Research</u> (Philadelphia) Briggs (C-913 C3) Greene (CBC-2F) Greene (PR-13D) Diller (CP-45B) Hauschka & Levan (C-1663 C) Lavine (C-1252 C3) Patterson (C-1253 C3) Reimann (INSTR-21F) Schultz (EG-29D) Schultz (C-1613 C) Stekol (C-1251 C3) Stekol (C-1251 C3s) Stekol (C-1251 C4) Toennies (C-1249 C3) Toennies (C-1479 C2) Weinhouse (E-30D) Weinhouse (C-1299 C3) Weinhouse (C-1476 C) Wenner (DRF-110A)	8,352 Ext. time Ext. time 3,000 12,225 2,700 19,336 150,000 9,000 15,778 13,900 2,500 17,580 11,660 14,850 7,500 20,000 10,000 Fellow 318,381	NCI ACS ACS ACS NCI NCI NCI ACS ACS NCI NCI NCI NCI NCI NCI ACS NCI NCI Fellow DRMF	Nucleus & embry. differen. & carcinogenesis Polysaccharides, immunization, Hydrocarbons Fungi Ascites tumors chromosomes & immunogenetic prop. Sulfur compounds Crystallographic tech. & struc. & prop. bio. systems Research in application of various techniques Genes, nutrition, drosophila melanogaster Heterochromatic chromosomes-cytochemical Metabolic interconversion amino acids, animals Sulfur containing nucleo-proteins Folic acid activity blood Intermediary cell metabolism, isotopic tracers Intermediary metabolism, tissues Oxidative metabolism neoplastic tissue
5. <u>Jefferson Medical College</u> (Philadelphia) Miller & Turner (C-1585 C) Paschke & Cantarow (C-1845) Rutman et al. (C-1307 C3) Schepartz (C-1803 C3) Tocantins (C-1931)	8,748 5,616 7,500 4,914 14,000 40,778	NCI NCI NCI NCI NCI	Myelokentric & lymphokentric acids Antimetabolites & chem. induced carcinogens Uracil, nucleic acid formation, acetaminofluorene, rats Phenylalanine & tyrosine in vitro metabolism Hemostasis neoplasms, blood-forming organs
6. <u>Montefiore Hospital</u> (Pittsburgh) Abrams (MET-17)	6,000	ACS	Nucleic acid purine synthesis, rapid tissue growth
7. <u>University of Pennsylvania</u> (Philadelphia) Berkowitz (DRF-134) Blakemore (SG-6) Borei (CP-56) Boyle (C-1959) Breedis (C-1116 C3) Chamberlain (R-18) Chamberlain (C-1984) Dituri (DRF-136) Ehrenstein (C-757 C3) Flexner (C-1807)	Fellow Scholar 6,000 6,147 4,979 7,000 2,612 Fellow 24,624 10,879	DRMF ACS ACS NCI NCI ACS NCI DRMF NCI NCI	Gastric achlorhydria, indicator-exchange resins Pulmonary function, operative proc. & post-op. care Enzyme systems & fertilization Carcin. chem. & normal & ascorbic acid def. guinea pigs Blood supply neoplasms, salamander Microdosimetry determinations radiation therapy Lipid synthesis, particle-free extracts liver Synthesis of steroids Embryonic cell

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		Amount	Agency	Research Subjects
<u>University of Pennsylvania (Cont'd)</u>				
Goddard & Erickson (C-488 C4)		15,000	NCI	Cells, higher plants
Heilbrunn (C-411 C5)		13,876	NCI	Cell division & colloidal change in protoplasm
Jones (CH-2C)	Ext. time	7,700	ACS	Urethane, animal & man
Lucke (#93)		7,700	JCC	Enzyme patterns, metastasis
Lynn (F-176)	Fellow	14,715	ACS	Water-soluble enzy.sys.pigeon liver,fatty acids,acetate
Marshall (C-1957)		50,000	NCI	Protein cytochemistry
Pendergrass (INSTR-64B)		1,500	ACS	Research program
Sayre (C-1822)		5,500	NCI	Relation structure & activity carcinogens
Seibert (BCH-10A)		5,000	ACS	Oncolytic,immunizing,toxic fractions, rat tumor extracts
Williams (C-1618 C)		4,848	NCI	Cytology living thyroid tissue changes
Wilson & Buchanan (C-1135 C3)		10,314	NCI	Nucleic acid metabolism
Wilson & Gurin (IS-4G)		191,694	ACS	Intermediary metabolism protein,fat,carbohydrate by carbon isotopes
8. <u>University of Pittsburgh (Pittsburgh)</u>				
Cox (N-20)		5,000	ACS	Maximum growth, rat
Freiser (C-1882)		7,236	NCI	Trace metals,carcin.subs.interaction nucleic acid metabolites
Hofmann (MET-9B)		6,500	ACS	Unique fatty acid from lactobacillus arabinosus
Mirsky & Harbison (C-1891)		7,776	NCI	Pepsinogen in blood & urine,gastric,human
Olson (N-21)		5,832	ACS	Dietary methyl restriction & leukemia
		32,344		
9. <u>Temple University (Philadelphia)</u>				
Schultz (C-1966)		5,000	NCI	Experimental chloroma
Waldron (C-2008)		2,943	NCI	Abnor.respon.blood coagulation to oral ingestion fat, human
		7,943		
10. <u>Wills Eye Hospital (Philadelphia)</u>				
Leopold (DRIR-254)		4,800	DRMF	Transplants in fungus of eye
11. <u>Wistar Inst. of Anatomy & Biology (Philadelphia)</u>				
Aptekman (C-1646 C)		11,340	NCI	Vaccine
Lewis (C-285 C6)		8,002	NCI	Synthesized compounds & dyes retardation & prevention,rats
Lewis (C-1592 C)		7,560	NCI	Tumor atrophy
		25,902		
<u>RHODE ISLAND</u>				
1. <u>Brown University (Providence)</u>				
Chase (ENV-3B)		1,800	ACS	Skin & its derivatives
Chase (C-592 C2)		7,100	NCI	
Fenton (N-9D)		4,212	ACS	Nutrition with inbred strains, mice
Fenton (C-1995)		2,160	NCI	
Sherman (R-11B)		3,813	ACS	Ionizing radiations on enzyme action of microorganisms
Wilson (INSTR-68A)		10,000	ACS	Histophysiology, histopathology & cytology mouse liver
Wilson (C-510 C5)		14,097	NCI	skin, nutritional requirements,diff.strains mice
		43,182		
2. <u>Providence College (Providence)</u>				
Hickey (MET-22)		7,000	ACS	Labile digitonin precipitable metabolites acetates, chick embryo,living rat liver tissue
3. <u>University of Rhode Island (Kingston)</u>				
Hartung (N-16A)		2,500	ACS	Factors tumor incidence, drosophila melanogaster

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SOUTH CAROLINA

Medical College of South Carolina (Charleston)
 Lynch (C-474 C5)
 Pratt-Thomas (C-1418 C2)

AmountAgencyResearch Subjects

9,650
 8,100
 17,750

NCI Lung tumors
 NCI Effect smegma uterine cervix

TENNESSEE

1. Meharry Medical College (Nashville)
 Hahn
 Johnson (C-1907)

59,872
 7,036
 66,908

AEC Radioactive gold tumor treatment
 NCI Radioactive silver, detection & treatment tumors

2. University of Tennessee (Memphis)

Dulaney (C-624 C4)
 Eades (CS-12B)
 Hardy (CS-14A)
 Overman (H-10B)
 Sprunt (C-1207 C2)
 van Middlesworth (C-1880)
 Whaley (C-1616 C)

11,685
 4,995
 Ext. time
 7,581
 9,500
 5,464
 8,200
 47,425

NCI Antigenic prop.alpha estradiol protein conjugates
 ACS Amino acid excretion
 ACS Nutrition & alarm response
 ACS Adrenal cortical func., cell membrane, metal ions
 NCI Protein & amino acid levels, Rous sarcoma, chickens
 NCI Thyroid nodule
 NCI Syn. nitrogen isologs chrysene & benzo(a) pyrene, anti-tumor activity

TEXAS

1. Baylor University (Houston)
 Bond (C-1552 C)
 Collins (R-19)
 Hettig (C-1641 R)
 Rose (C-1707 C)
 Spurr (CH-18)

1,512
 8,000
 4,174
 8,963
 4,915
 27,564

NCI Growth, metabolism microorganisms
 ACS Enzymes & radiation sickness, x-ray irradiation intestine
 NCI Hodgkin's disease, nitrogen mustard, x-ray
 NCI Hodgkin's disease, immunology
 ACS Enzyme inhibition, tumor chemotherapeutic agents

2. Odessa College (Odessa)
 Barnes (DRIR-195A)

1,000

DRMF Sunshine, chemical composition & physiological properties, biochemical compounds

3. St. Joseph's Infirmary (Houston)
 Marcuse (MOR-25)

4,200

ACS Initial outgrowth, tissue culture, human tumors

4. Southwestern Fdn. for Research & Education (San Antonio)
 Werthessen (C-1609 C)

7,452

NCI Estronase concentration in blood

5. University of Texas (Austin, Galveston & Houston)

Awapara (MET-8B)
 Awapara (C-1831)
 Barnett (CP-55)
 Clark (INSTR-23F)
 Clark (DRIR-65B)
 Foster (MET-20)
 Hsu (DRF-115A)
 Jirgensons & Awapara (C-1785)
 Oliver (HG-2G)
 Oliver & Lush (G-1)
 Pomerat (CP-12F)
 Reid (BCH-16)
 Rigdon (C-1469 C)
 Wyss (R-17A)

3,500
 9,990
 3,500
 75,000
 15,000
 5,000
 Fellow
 8,253
 6,480
 6,000
 10,000
 5,000
 4,968
 9,000
 161,691

ACS Sex hormones, metabolism amino acids, prostate
 NCI
 ACS ATP & Krebs cycle, cell div., marine eggs
 ACS Growth, hormonal & radiobiologic
 DRMF Cobalt-60
 ACS Intermediary metabolism, fungi
 DRMF Nuclear cytology human neoplastic tissue
 NCI Blood proteins
 ACS Genetics
 ACS Inheritance patterns, ocular, bovines
 ACS Growth, malignant cells
 ACS Natural metabolic inhibitor
 NCI Skin tumors, methylcholanthrene, white Pekin ducks
 ACS Organic peroxides

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UTAH

1. Utah State Agricultural College (Logan)
Gardner (EG-36A)

Amount	Agency	Research Subjects
2,484	ACS	Genetic & cytological analysis tumorous head, drosophila melanogaster

2. University of Utah (Salt Lake City)
Dougherty (GPB-10E)
Fessas (DRF-138)
Kimmel (F-59C)
Plenk (C-1222 C)
Samuels (EEP-8E)
Samuels & Reich (C-307 C5)
Sandberg (SG-15)

10,314	ACS	Growth lymphoid tissues, mice, inbred
Fellow	DRMF	Chemotherapy of malignancy
Fellow	ACS	Proteinases activated by sulfhydryl
3,000	NCI	Radiation induced leukemia by parabiosis
13,368	ACS	Intermediary metabolism, steroids
15,304	NCI	Steroid metabolism
Scholar	ACS	Metabolism & leukemia
41,986		

VERMONT

- University of Vermont (Burlington)
Novikoff (E-32D)
Pearson (C-431 C5s)

5,000	ACS	Rapid growth, rat liver
13,687	NCI	Enzymatic, biochemical & cytochemical-carcinogenesis
18,687		

VIRGINIA

1. Medical College of Virginia (Richmond)
Clayton (C-17C)
Clayton (C-1541 C)
Clayton (C-1541 C2)
Williams (INSTR-40E)

Ext. time	Agency	Research Subjects
4,500	ACS	Cells, precancerous & tumor-bearing livers
5,184	NCI	Minerals & carcinogenesis
10,000	NCI	
19,684	ACS	Support research beds, radioactive isotopes, chemotherapeutic & endocrine agents, doses

2. University of Virginia (Charlottesville)
Burger (BGH-12)
Chanutin (C-1788)
Chanutin & Hoch (C-269 C4)
Hoch-Ligeti (C-1583 C)
Parson (C-1815)
Rappaport (C-1453 C)

5,886	ACS	Phosphoric acid analogs, nucleotides
12,000	NCI	Iron metabolism, irradiated rats
12,500	NCI	"Trace" components, serum & tissues
7,650	NCI	Nutrition & hepatic tumors
16,048	NCI	Amino acid metabolism
2,000	NCI	Ovular tumors plants
56,084		

WASHINGTON

1. State College of Washington (Pullman)
Nilan & Elliott (R-15B)

2,950	ACS	Oxygen & low temperature & biologic effects x-rays
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2. University of Washington (Seattle)
Dowmont (F-141A)
Everett (C-1681 C)
Fletcher (C-1744 S)
Groman (VI-3)
Hanahan (BGH-4A)
McDonald (CH-13)
Whiteley (CP-46B)

Fellow	ACS	Enzymatic degradation yeast triose phosph. dehydrogenase
5,788	NCI	Tissue localization & metabolism of C ¹⁴
2,260	NCI	Fluorene & aminofluorene derivatives
5,000	ACS	Corynebacterium diphtheriae
6,500	ACS	Phospholipide-splitting enzymes
5,500	ACS	Chemotherapy, prostate
4,968	ACS	Morphogenesis, ciliate protozoa
30,016		

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WISCONSIN

1. Marquette University (Milwaukee)

Laskowski (E-35C)

Saunders (C-1481 C2)

2. University of Wisconsin (Madison)

Baumann (PR-7G)

Cohen (C-822 C3)

Deutsch (C-1786)

Huskins (BO-14E)

Johnson (MET-3C)

Lardy (MET-2C)

LePage (E-13E)

Mahler (BCH-9A)

Miller & Miller (N-5F)

Miller & Miller (C-355 C6)

Miller & Miller (C-355 C7)

Mueller (C-1897)

Parks (F-111B)

Potter (C-646 C4)

Rieck (SG-13)

Riker & Hildebrandt (MOB-26)

Rusch (INSTR-71A)

Rusch & Boutwell (C-828 C4s)

Rusch & Boutwell (CH-15)

Skoog (BO-19D)

Waisman (N-22)

Waisman (C-1792)

Amount

6,500

5,790

12,290

Ext. time

12,500

8,910

4,500

1,836

7,000

4,536

4,500

5,454

12,258

12,258

7,992

Fellow

16,740

Scholar

9,000

25,000

3,780

6,966

7,500

5,292

6,000

162,022

Agency Research Subjects

ACS Nucleolytic enzymes

NCI Melanin pigmentation, higher vertebrates

ACS Diet & tumor formation

NCI Soluble proteins & tissues

NCI Multiple myeloma proteins (Bence-Jones p)

ACS Chromosome reproduction & mitosis

ACS Penicillin

ACS Metabolic regulators

ACS Phosphorylated compounds & cells

ACS DPNH - cytochrome(c) reductase

ACS Mechanism, chemical carcinogenesis

NCI Hepatic neoplasms

NCI Mechanism, action, estrogenic hormones

ACS Enzymes

NCI Biochemical synthesis & growth

ACS Carcinogenic wave-lengths of ultraviolet

ACS Growth & metabolites & basic processes

ACS Genesis, metabolism, chemotherapy neoplas. tissues

NCI Metabolism tumor resistance

ACS

ACS Chem. control growth & organ forma., plant tissue

ACS Antibiotics & metabolic antagonists, growth

NCI Amino acid metabolism, leukemia, rats

Chemotherapy Screening Techniques (1952-53 funds)

150,000

ACS

* Indicates research concerning tobacco

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